

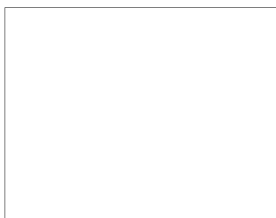
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NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

**PHOTOGRAPHIC
INTERPRETATION
REPORT**

**AIR WARNING RADAR FACILITIES
IN THE MIDDLE EAST
JUNE 1967 - FEBRUARY 1971**



25X1

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25X1

APRIL 1971
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9 PAGES

PIR-019/71

GROUP 1: EXCLUDED FROM
AUTOMATIC DOWNGRADING
AND DECLASSIFICATION

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TOP SECRET RUFF**AIR WARNING RADAR FACILITIES IN THE MIDDLE EAST
JUNE 1967 - FEBRUARY 1971****INTRODUCTION**

1. This is a report on the status of air warning (AW) radar facilities in the Middle East from June 1967 to February 1971. The information in this report has been derived from a review of all KEYHOLE photography covering Egypt, Jordan, Syria, Iraq, Lebanon, and Israel during the 44-month period following the six-day Israeli-Arab war of 5-10 June 1967. This report supersedes an earlier report with the same title but with a cutoff date of September 1969.

2. AW radar facilities considered in this report do not include radars directly associated with surface-to-air missile sites or with antiaircraft artillery sites.

25X1

BASIC DESCRIPTIONLocations of Sites

4. Since September 1969, 21 additional AW radar sites have been identified in Egypt, bringing the total to 56. Three additional sites have been identified in Iraq, bringing the total to 11. In Syria, one older site has been removed, but seven new sites have been added, bringing the total to nine. Jordan has a total of six sites, all of which have been identified since September 1969. No AW radar sites have been observed in Lebanon.

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As of February 1971, a total of 89 AW radar facilities had been identified in the Middle East. Locations of the 56 sites in Egypt are shown on Figure 1. Names and other data concerning these sites are presented in Table 1, which is keyed to Figure 1. The same functions are performed for the remainder of the sites in the Middle East by Figure 3 and Table 2.

25X1

Egypt

5. Egypt had only 11 AW radar facilities before the six-day war of June 1967. Following that war, there was a lull in Egyptian activity; however, construction of new AW radar facilities as well as improvement of existing sites was initiated during the first half of 1968. By February 1971 Egypt had a total of 56 AW radar facilities. Before June 1967, Egypt had made no use of radar mounds to reduce terrain-masking problems and had taken little or no action to harden the sites. By February 1971, however, use of radar mounds was common practice, and almost all the facilities had been hardened or were in the process of being hardened.

6. TALL KING AW radar facilities were newly identified in Egypt in October and November 1970, one at Al Mansurah (Figure 1, item 15) and another at Bani Suwayf (item 41). Both TALL KING facilities were collocated with previously existing AW radar facilities. Photography of February 1971 revealed that the Bani Suwayf facility was a modified TALL KING which had not previously been identified outside the USSR. A photograph of the Bani Suwayf TALL KING Radar Facility and its collocated Bani Suwayf AW Radar Facility is presented on Figure 2.

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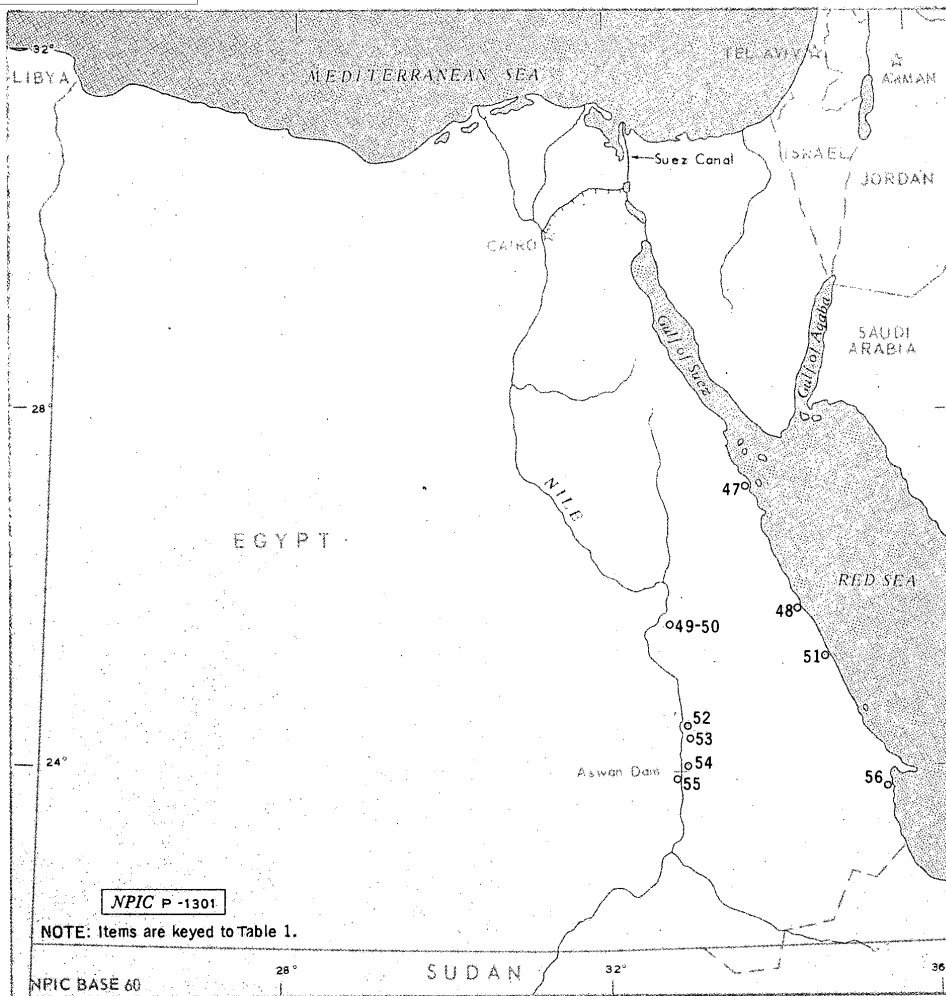


FIGURE 1. LOCATIONS OF AW RADAR FACILITIES IN EGYPT

Table 1. AW Radar Facilities in Egypt, Listed Alphabetically
(Item numbers are keyed to Figure 1)

Item	Facility	Geographic Coordinates	Radars and Radar Mounds	25X1
27	Abu Suweir Airfield Radar Facility	30-34-55N 032-07-00E	3 unoccupied radar mounds	
26	Abu Suweir Radar Facility	30-35-10N 032-08-20E	4 unoccupied radar mounds	
38	Al Fayyum Airfield AW Radar Facility	29-33-25N 030-54-10E	1 BAR LOCK 1 SIDE NET 1 SPOON REST	
37	Al Fayyum Road AW Radar Facility	29-42-00N 030-54-40E	Unoccupied	
15	Al Mansurah TALL KING AW Radar Facility	30-56-40N 031-26-30E	1 TALL KING	
13	Al Manzilah AW Radar Facility	31-03-40N 031-54-10E	1 unoccupied radar mound	
46	Al Minya AW Radar Facility	28-05-15N 030-47-50E	Prob unoccupied	
48	Al Qusayr AW Radar Facility	26-04-05N 034-18-10E	1 occupied radar mound	
17	Al Rahmanyah Airfield AW Radar Facility	31-02-36N 030-40-01E	1 occupied radar mound	

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MEMORANDUM FOR: Recipients of [] PIR-019/71
Air Warning Radar Facilities in the
Middle East, June 1967 - February 1971
Photographic Interpretation Report
Dated April 1971

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SUBJECT : Substitution of Pages 1 and 2

Please substitute the attached pages 1 and 2 for the
pages 1 and 2 previously printed in the PIR described above.

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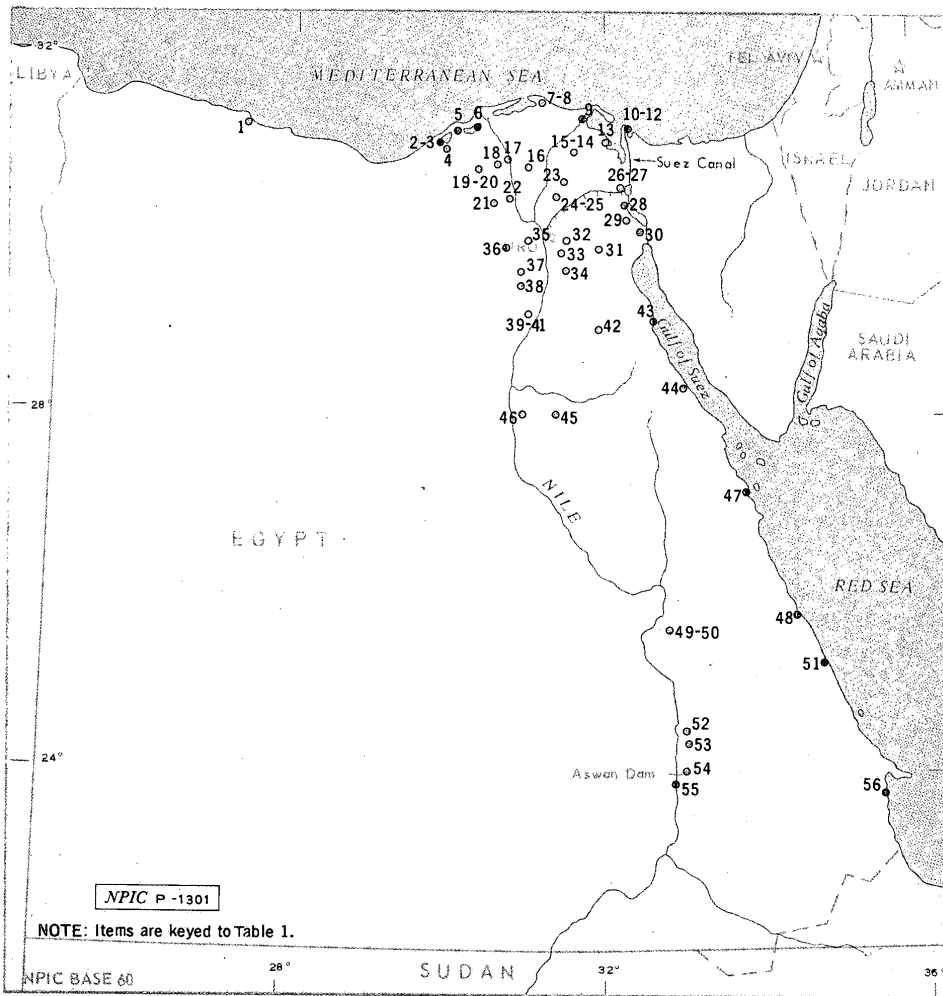


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26	Abu Suweir Radar Facility	30-35-10N 032-08-20E	4 unoccupied radar mounds
38	Al Fayyum Airfield AW Radar Facility	29-33-25N 030-54-10E	1 BAR LOCK 1 SIDE NET 1 SPOON REST
37	Al Fayyum Road AW Radar Facility	29-42-00N 030-54-40E	Unoccupied
15	Al Mansurah TALL KING AW Radar Facility	30-56-40N 031-26-30E	1 TALL KING
13	Al Manzilah AW Radar Facility	31-03-40N 031-54-10E	1 unoccupied radar mound
46	Al Minya AW Radar Facility	28-05-15N 030-47-50E	Prob unoccupied
48	Al Qusayr AW Radar Facility	26-04-05N 034-18-10E	1 occupied radar mound
17	Al Rahmaniyah Airfield AW Radar Facility	31-02-36N 030-40-01E	1 occupied radar mound

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Table 1. (Cont)

Item	Facility	Geographic Coordinates	Radars and Radar Mounds	25X1
5	Alexandria AW Radar Facility	31-18-50N 030-03-05E	1 SIDE NET 1 SPOON REST	
4	Alexandria AW Radar Facility 2	31-02-30N 029-48-00E	2 BAR LOCK 2 SIDE NET	
32	Almaza AW Radar Facility	30-05-00N 031-21-50E	Unoccupied	
55	Aswan AW Radar Facility 1	23-57-25N 032-49-50E	1 BAR LOCK 2 SPOON REST	
54	Aswan AW Radar Facility 2	24-03-05N 032-54-00E	Unoccupied	
7	Baltim AW Radar Facility	31-33-45N 031-04-30E	2 unoccupied radar mounds	
8	Baltim East AW Radar Facility	31-31-20N 031-09-20E	1 BAR LOCK 1 height-finder radar	
40	Bani Suwayf AW Radar Facility	29-09-40N 030-58-20E	2 BAR LOCK 2 SIDE NET	
41	Bani Suwayf TALL KING AW Radar Facility	29-10-40N 030-59-50E	1 SPOON REST 1 TALL KING (modified)	
39	Beni Suef AW Radar Facility	29-11-50N 031-02-00E	1 SCORE BOARD Unoccupied	
23	Bilbays Airfield AW Facility	30-23-44N 031-34-55E	1 BAR LOCK	
16	Birma Airfield AW Radar Facility	30-48-20N 030-57-50E	1 occupied radar mound	
33	Cairo AW Radar Facility SE	30-01-00N 031-16-40E	1 SQUAT EYE	
35	Cairo West Airfield AW Radar Facility	30-06-18N 030-56-05E	1 BAR LOCK 1 SPOON REST	
18	Damanhur AW Radar Facility	31-01-00N 030-36-30E	2 SIDE NET 2 range and azimuth radars	
9	Damietta/Ras-El Barr AW Radar Facility	31-27-18N 031-46-40E	1 height-finder radar 2 occupied radar mounds	
53	Daraw Airfield AW Radar Facility	24-25-40N 032-57-05E	1 BIG BAR	
2	El Agami AW Radar Facility 2	31-03-28N 029-42-55E	3 unoccupied mounds	
3	El Agami AW Radar Facility 3	31-04-20N 029-44-20E	1 BIG BAR	
14	El Mansura AW Radar Facility	30-58-03N 031-25-37E	2 BAR LOCK 2 SIDE NET	
29	Fayid Airfield AW Radar Facility 2	30-20-00N 032-17-00E	1 radar mound (prob unoccupied)	
11	Gamal Airfield AW Radar Facility	31-16-30N 032-14-50E	1 BIG BAR (prob unoperational)	
36	Gebel Buhit AW Radar Facility	29-53-30N 030-25-20E	2 prob radars	
34	Helwan AW Radar Facility NE	29-54-57N 031-23-32E	Occupancy unknown	
47	Hurghada AW Radar Facility	27-12-50N 033-49-15E	1 BIG BAR	
6	Idku AW Radar Facility	31-18-52N 030-20-26E	1 possibly occupied radar position	
24	Inchas AW Radar Facility	30-17-45N 031-27-00E	Unoccupied	
25	Inchas AW Radar Facility SW	30-19-25N 031-25-10E	2 BAR LOCK 2 SIDE NET 1 SPOON REST	

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Table 1. (Cont)

Item	Facility	Geographic Coordinates	Radars and Radar Mounds	25X1
19	Jiyanklis Airfield AW Radar Facility	30-49-30N 030-10-50E	2 BAR LOCK	
20	Jiyanklis Airfield AW Radar Facility 2	30-49-55N 030-12-00E	1 prob ROCK CAKE/STONE CAKE	
30	Junayfah AW Radar Facility	30-11-40N 032-27-30E	1 FLAT FACE	
22	Kafr Daud AW Radar Facility	30-32-50N 030-43-20E	2 occupied radar mounds*	
52	Kom Ombo AW Radar Facility	24-29-30N 032-54-20E	1 prob BAR LOCK	
49	Luxor Airfield AW Radar Facility 1	25-40-20N 032-41-30E	1 POSS FLAT FACE	
50	Luxor Airfield AW Radar Facility 2	25-40-30N 032-44-00E	1 BAR LOCK 1 SIDE NET 1 SPOON REST 1 SCORE BOARD	
51	Marsa Al Alam AW Radar Facility	25-10-00N 034-50-50E	2 radar mounds (prob unoccu- pied)	
1	Matruh AW Radar Facility	31-18-25N 027-12-50E	1 BAR LOCK 1 FLAT FACE 1 SIDE NET	
10	Port Said AW Radar Facility	31-17-20N 032-12-52E	3 occupied radar positions	
12	Port Said AW Radar Facility 2	31-16-30N 032-15-40E	1 unoccupied radar mound	
56	Ras Banas AW Radar Facility	23-57-00N 035-28-40E	1 prob SPOON REST 1 poss SCORE BOARD	
44	Ras Gharib AW Radar Facility	28-19-30N 033-04-55E	1 radar mound (unoccupied)	
28	Treaty Road AW Radar Facility	30-26-00N 032-17-10E	1 unoccupied radar mound 2 height-finder radars 1 range & azimuth radar	
42	Wadi Abu Rish Air- field AW Radar Facility	29-01-00N 031-42-00E	1 prob range & azimuth radar 1 prob height- finder radar	
31	Wadi Al Jandali Air- field AW Radar Facility	30-03-00N 031-51-00E	1 prob BAR LOCK 1 SIDE NET 1 SPOON REST	
45	Wadi Muathil AW Radar Facility	28-36-00N 031-18-00E	1 prob height- finder radar	
21	Wadi Natrun Airfield NE AW Radar Facility	30-31-30N 030-33-00E	1 BIG BAR	
43	Zafarana AW Radar Facility	29-10-20N 032-38-25E	2 radar mounds (prob occupied)	

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TOP SECRET RUFFSyria

7. Syria had three AW radar facilities in September 1969. One of these, Dumayr AW Radar Facility [] has been removed, but seven new sites have been added, bringing the total to nine. BAR LOCK, SIDE NET, and FLAT FACE radars observed at some of the Syrian facilities since September 1969 (see Table 2) represent a notable improvement in Syria's air warning capability. Three of the Syrian sites have been hardened since September 1969. Dumayr AW Radar Facility SSE, shown on Figure 4, is typical of these hardened facilities.

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Iraq and Jordan

8. In September 1969 Iraq had eight AW radar facilities, and Jordan had none. Since then, three new facilities have been identified in Iraq, bringing the total to 11, and six facilities have been identified in Jordan.

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Table 2. AW Radar Facilities in [REDACTED]
 Syria, Jordan, and Iraq, Listed Alphabetically
 (Item Numbers are Keyed to Figure 3)

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Item	Facility	BE Number	Geographic Coordinates	Radars and Radar Mounds
[REDACTED]				

25X1

Syria

67	Dayr Az Zawr AW Radar Facility	35-18-30N 040-09-00E	1 BIG BAR	25X1
70	Dumayr AW Radar Facility SSE	33-34-00N 036-43-30E	2 BAR LOCK 2 SIDE NET	
66	Hamah AW Radar Facility	35-13-20N 036-53-05E	3 poss range & azimuth radars 2 poss height-finder radars	
72	Jabal Al Mani AW Radar Facility	33-19-45N 036-17-00E	1 poss range & azimuth radar 1 poss height-finder radar	
64	Lattaquie AW Radar Facility NW	35-33-40N 035-44-42E	2 BIG BAR	
71	Marj As Sultan AW Radar Facility	33-29-30N 036-28-30E	2 prob range & azimuth radars 1 poss height-finder radar	
65	Tartus AW Radar Facility	34-50-40N 035-54-30E	1 BAR LOCK 1 height-finder radar 1 prob range & azimuth radar	
68	Tiyas Airfield AW Radar Facility	34-33-20N 037-35-25E	1 BAR LOCK 1 BIG BAR 1 SIDE NET	
69	Tiyas Airfield AW Radar Facility 2	34-33-00N 037-35-45E	1 poss FLAT FACE Site under construction	

Jordan

75	Al Qatranah AW Radar Facility	31-16-45N 036-15-45E	1 poss range & azimuth radar 1 poss height-finder radar
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77	H-5 Airfield AW Radar Facility	32-12-50N 037-05-00E	2 AW radars	25X1
73	Jabal Umm Ad Daraj Radar Facility	32-19-00N 035-48-10E	1 prob range & azimuth radar 1 prob height-finder radar	
74	Rihab AW Radar Facility	32-19-30N 036-06-05E	1 range & azimuth radar 1 poss height-finder radar	
78	Ruwayshid AW Radar Facility	32-25-30N 039-08-30E	1 FLAT FACE 1 prob FLAT FACE	
76	Tall Al Asfar AW Radar Facility	32-11-20N 036-52-25E	2 range & azimuth radars 1 height-finder radar 1 poss height-finder radar	
 <u>Iraq</u>				
87	Al Kut AW Radar Facility	32-30-45N 045-47-50E	1 V-beam radar	
88	Ash Shuaybah AW Radar Facility 1	30-25-44N 047-37-20E	1 TOKEN 1 KNIFE REST 1 poss FISH NET	
89	Ash Shuaybah AW Radar Facility 2	30-24-15N 047-40-00E	1 BIG BAR 1 KNIFE REST	
85	Camp Taji AW Radar Facility	33-31-08N 044-14-48E	2 BAR LOCK 2 SIDE NET 1 KNIFE REST 1 UI RADAR	
83	Habbaniyah AW Radar Facility	33-21-40N 043-34-30E	1 unoccupied radar mound	
84	Habbaniyah Plateau AW Radar Facility	33-20-35N 043-34-40E	1 BIG BAR 1 poss FISH NET	
79	H-3 AW Radar Facility	32-55-05N 039-42-10E	Unoccupied	
80	H-3 Airfield AW Radar Facility	32-56-12N 039-44-37E	1 BAR LOCK 1 SIDE NET 2 NYSA-C 1 NYSA-B	
82	Kirkuk Military Airfield AW Radar Facility	35-27-22N 044-20-58E	1 BIG BAR 1 TOKEN 1 poss KNIFE REST	
81	Mosul Airfield AW Radar Facility	36-15-50N 043-07-50E	1 TOKEN-type radar 1 prob KNIFE REST 1 BIG BAR	
86	Rashid Airfield AW Radar Facility	33-16-50N 044-29-20E	Unoccupied	

*Facility in Israeli-occupied Sinai.

**Facility in Israeli-occupied portion of Syria.

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REFERENCES

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DOCUMENT

1. NPIC. Air Warning Radar Facilities in the Middle East, June 1967 - September 1969, Nov 69 (TOP SECRET RUFF)

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REQUIREMENT

NPIC/IEG/WGD/MEAFAB Project 111110NB

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